Korean Technology

THEME: Technology

HISTORICAL BACKGROUND: Technology can tell a lot about a civilization’s values and advancement. Korean technology was highly advanced in the areas of military, astronomy, writing, and daily life. These technologies were important in developing its culture and influencing others.

**TASK:**

**Write a paragraph in which you :**

* **Summarize the accomplishment of the Koreans in ONE of the following categories of technology: military, measurements, and daily life/writing (counts as one category)**
* **Evaluate how the technology impacted other regions outside of Korea.**

You must use **THREE** documents and outside information check wikipage for outside information

Document I –

|  |  |
| --- | --- |
| Source: Famous Korean Portraits by Mary Connor, Education about Asia, <http://www.asian-studies.org/>  Before Hideyoshi’s (emperor of Japan) anticipated invasion, Admiral Yi build his famous Turtle Ship. He create the world’s first ironclad long before the Monitor of Civil War fame. His first ship was nearly sixty-five feet long, fifteen feet wide amidships, with sides nearly eight feet high. On the sides were portholes through which cannons were fired to blow the Japanese out of the water. Thick iron plates with iron spikes on the deck would prevent the enemy from boarding. There was a fearsome dragon’s head on the bow of the ship. By burning a combination of sulfur and saltpeter, clouds of smoke was emitted through the dragon’s head and created a protective smoke screen.  In 1592, when Admiral Yi’s Turtle Ships engaged the Japanese, he managed to cut off their source of supplies. The Koreans easily destroy twenty-six of the Japanese thirty ships. In a second attack Admiral Yi only had twelve ships, but he lured the Japanese into a narrow strait. He waited patiently for them to enter the channel and when they did, he destroyed their ships, a fleet of over 300 strong! As the enemy retreated, a stray bullet hit Admiral Yi, and he died. The great Hideyoshi also died soon after. The war was now over. Korea had been saved. Japan’s forces retreat to their home islands and will now pursue a policy of isolation for over 250 years. | |
|  | H:\Global 2013\Korean Photos\DSC_1225.JPG |

1. What military innovation did Admiral Yi’s Turtle ship have that improved its performance as a weapon of war?
2. How was the turtle ship effective in its military engagement against the Japanese?

Document 2



*Singijeon: First Mobile Rocket Launcher, 1474 - (100 arrows launched at once). It used gunpowder to launch arrows 1000 meters distance. It was larger than the 32lb rocket developed by Sir William Congreve in 1806. The Singijeon was key to Korean victories against the Japanese.*

1. How did this mobile rocket launcher improve Korean military practices ?

Document 3

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| --- | --- |
| http://for91days.com/photos/Busan/Gyeongju%20Guide/Cheomseongdae-Observatory.jpg | Chomsongdae is the world’s oldest astronomical observatory. It was built inside the royal palace grounds during the Silla dynasty around 632 AD, during the reign of Queen Sondok. The design of this building would be later used as the basis for the astronomical observatory in Asuka, Japan in 675 and Duke Zhou’s observatory in China in 723 AD.  Koreans believed that man should live in harmony with Nature. In the official *History of Korea* (918-1392), there is a section entitled the *Book of Astronomy* which provides 5,000 highly reliable astronomical records taken during the dynasty.  Source: *Fifty Wonders of Korea. Volume 2. Science and Technology,* 2008. |

1. How was the Korean Chomsongdae astronomical observatory influential to other regions?

Document 4

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| --- |
| http://upload.wikimedia.org/wikipedia/commons/3/3f/Water_clock_korea.jpg  Chagyongnu was an automatic water clock made in 1434 by King Sejong. Building on Chinese and Arabian innovations, it was powered by flowing water, and the time signals were triggered by a system of falling marbles. The purpose of the automatic clock was to provide a means of time-keeping that required no human input and was therefore reliable. Every two hours the Chagyongnu would automatically ring a bell and one of the 12 zodiac animals would appear to indicate the time.  Source: *Fifty Wonders of Korea. Volume 2. Science and Technology,* 2008. |

1. How did the water clock improve the regulation of time keeping in King Sejong’s court?

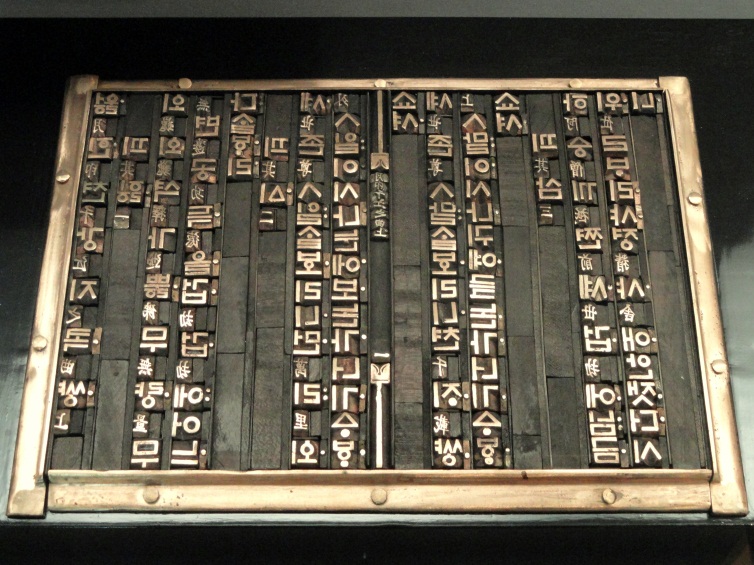
Document 5



Kudle Underfloor heating – the world’s first underfloor heating works by means of an outside furnace, underfloor pipes, and a special stone that retains heat for long periods of time. Still found in Korean homes today, it has been shown to help allergies, aid sleep and improve general quality of life. American architect, Frank L. Wright was the first western architect to develop an underfloor heating system in modern times in 1914 after he studied the Korean system. Source: *Fifty Wonders of Korea. Volume 2. Science and Technology,* 2008.

1. How was Frank L. Wright inspired by Korean technology?

Document 6



Movable type is the system of [printing](http://www.wikipedia.org/wiki/Printing)  that uses movable [components](http://www.wikipedia.org/wiki/Sort_(typesetting)) to reproduce the elements of a document (usually individual letters or punctuation). The world's first known movable-type system for printing was created in [China](http://www.wikipedia.org/wiki/China) around 1040 AD by [Bi Sheng](http://www.wikipedia.org/wiki/Bi_Sheng) (990–1051) during the [Song Dynasty](http://www.wikipedia.org/wiki/Song_Dynasty); then the metal movable-type system for printing was made in [Korea](http://www.wikipedia.org/wiki/Korea) during the [Goryeo Dynasty](http://www.wikipedia.org/wiki/Goryeo_Dynasty" \o "Goryeo Dynasty) (around 1230). This led to the printing of the [Jikji](http://www.wikipedia.org/wiki/Jikji" \o "Jikji) in 1377—today the oldest extant movable metal print book. Later, the Song dynasty in China will use this moveable metal type to print money and later Confucian texts.

Neither movable-type system was widely used, probably because of the enormous amount of labour involved in manipulating the thousands of ceramic [tablets](http://www.wikipedia.org/wiki/Tablets), or in the case of [Korea](http://www.wikipedia.org/wiki/Korea), [metal](http://www.wikipedia.org/wiki/Metal) [tablets](http://www.wikipedia.org/wiki/Tablets). Around 1450, [Johannes Gutenberg](http://www.wikipedia.org/wiki/Johannes_Gutenberg) introduced what is generally regarded as an independent invention of movable type in Europe

Compared to [woodblock printing](http://www.wikipedia.org/wiki/Woodblock_printing), movable-type pagesetting was quicker and more durable for alphabetic scripts. The metal type pieces were more durable and the lettering was more uniform, leading to typography and [fonts](http://www.wikipedia.org/wiki/Font). The high quality and relatively low price of the [Gutenberg Bible](http://www.wikipedia.org/wiki/Gutenberg_Bible) (1455) established the superiority of movable type, and [printing presses](http://www.wikipedia.org/wiki/Printing_press) rapidly spread across Europe, leading up to the [Renaissance](http://www.wikipedia.org/wiki/Renaissance), and later [all around the world](http://www.wikipedia.org/wiki/Spread_of_the_printing_press).

Source: http://www.princeton.edu/~achaney/tmve/wiki100k/docs/Movable\_type.html?scrlybrkr=c134cec0

1. What advantages did the use of metal moveable type have over woodblock printing in Korea?

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_

Scaffolding Response for Korean Technology DBQ

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5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_